STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Tony Anziano, Program Manager /	FILE: **E.A.** 04 - 0120F4
	CO-RTE-PM SF-80-13.2/13.9
FROM: Darryl Schram, Senior TE	**FED. NO.** No
CCO#: **277** SUPPLEMENT#: **0** Category Code: **CHPT**	CONTINGENCY BALANCE (incl. this change) **$39,871,656.42**
COST: **$473,110.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Hinge A Seismic Joint Installation	**PROJECT DESCRIPTION:** CONSTRUCT SELF-ANCHORED SUSPENSION BRIDGE

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
2490 Day(s)	**0** Day(s)	**501** Day(s)	**20** %	**23**

THIS CHANGE ORDER PROVIDES FOR:

Modifying Hinge A expansion joint fabrication including adding a small radius into each support plate to achieve the 1 mm bearing surface tolerance, prior to breaking the plate in order to acquire a 19 mm taper and providing a second shift of Critical Weld Inspection at the seismic joint fabrication facility.

Modifying Hinge A expansion joint installation including:
- Furnishing and installing elastomeric concrete above blockouts.
- Furnishing and installing Fast Setting Hydraulic Cement Concrete (FSHCC) in lieu of Self Consolidating Concrete (SCC)
- Performing additional field work to align and install revised support plates, channel assemblies, and deck plates.
- Installing Trelleborg Transflex panels.
- Installing additional gutter beneath the channel assemblies.
- Eliminating overlay grinding to match seismic joint

CCO 25 S0 "Seismic Joint Modifications Hinge A" included compensation for fabrication changes to the Hinge A Seismic Joint. Hinge A installation costs known, as of November 17, 2009, were compensated for as part of CCO 108 S1 resolution. CCO 25 S0 which also references CCO 108S1 noted that additional costs to install the Hinge A Seismic Joint will be compensated for in a future change order. CCO 277 is that future change order. Installation costs included in CCO 25S0 and CCO 108S1 were reviewed when determining the additional costs merited in CCO 277.

Contract Change Order 108 S1 "Fabrication Recovery" revised machined grooves, traction, taper, and diverter plates for Hinge A deck and support plates at the fabricator's facility. The channel assemblies were also modified by extending the vertical plate and adding bent studs. CCO 108 S1 also provided compensation to perform the following Hinge A field installation items: furnish and install FSHCC in the Skyway blockouts, modify rebar placement in the blockouts for the anchor studs, shim and true plates, furnish and install additional silicone seals, grind overlay to match seismic joints, and furnish and install additional overlay above the blockouts due to deck plate taper elimination.

CCO 25 S0 "Seismic Joint Modifications Hinge A" continued to revise the Hinge A seismic joints at the fabricator's facility. Modifications included adding Trelleborg Transflex panels and support bars, replacing deck plates, and revising channel assembly stiffener plates.

CCO 277 will revise fabrication of the support plates to achieve the bearing surface tolerance of 1 mm necessary to meet the required deflection. A second shift of inspectors will be added to support accelerated fabrication.

CCO 277 will also include the following additional installation costs, that were not included in CCO 25 S0 or CCO 108 S1, for Hinge A seismic joints:

Before the seismic joint was revised, it had a tapered deck plate that would slide during a seismic event. CCO 25 S0 changed the deck plate to a flat plate and this change order will add elastomeric concrete to act as a sacrificial element during a seismic event.

CCO 25 S0 revised support plates, channel assemblies, and deck plates from 7 per side to 14 smaller plates or assemblies per bridge deck side. This change order will add welded support angles, all-thread rods, and lifting lugs to each additional plate and assembly for seismic joint erection. Additional spacer blocks will be installed between each additional support

plate. Additional angle struts will be temporarily installed over Skyway blockouts to align each additional channel assembly for deck plate installation.

CCO 25 S0 shortened deck plates in order to install Trelleborg Transflex panels in lieu of tapered plates with v-grooves for the Hinge A seismic joints. This change order will install and align the Trelleborg Transflex panels, install anchor rods with lock nuts and washers, and seal holes above the anchor rods.

The revised deck plate to channel assembly connection will have 4 additional high strength bolts per bridge side.

CCO 25 S0 fabricated additional gutters and this change order will install these gutters under channel assemblies on both bridge deck sides.

Furnishing and installing Fast Setting Hydraulic Cement Concrete (FSHCC) in lieu of Self Consolidating Concrete (SCC) was estimated and agreed to as part of CCO 108S1 in November 2009. The Contractor did not have a subcontractor agreement at that time and found that actual costs were significantly higher due to escalated material, labor, and equipment costs for this work in April 2013. CCO 277 includes a credit for compensation provided for furnishing and installing FSHCC and provides compensation for the actual costs of the work.

Since the issuance of CCO 108S1, grinding overlay to match seismic joints was eliminated; therefore CCO 227 includes a credit for compensation provided in CCO 108S1.

This change order resolves the costs associated with Contractor Request for Information (RFI) number 2692 with respect to changes listed above.

The total cost of this change order is $473,110.00 lump sum, which can be financed from the contingency fund. A detailed cost analysis is on file

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order has concurrence from William Casey (Supervising TE), Rich Foley (HQ Oversight), Wenyi Long (Bridge Design), Lina Ellis (Maintenance), and Jing Chen (District Design).

CONCURRED BY:			
Construction Engineer:	William Casey, Sup TE	Date	6/24/13
Bridge Engineer:	CT Oversight, Wenyi Long, P.E.	Date	12/28/12
Project Engineer:	District Design, Jing Chen	Date	12/28/12
Project Manager:		Date	
FHWA Rep.:		Date	
Environmental:		Date	
Other (specify):	HQ, Rich Foley	Date	6/25/13
Other (specify):	Struct. Maint, Lina Ellis	Date	1/4/13
District Prior Approval By:	HQ, Larry Salhaney	Date	7/1/13
HQ (Issue Approve) By:		Date	
Resident Engineer's Signature:		Date	1/23/14

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$0.00	$0.00
ADJUSTMENT	$473,110.00	$473,110.00
TOTAL	$473,110.00	$473,110.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT